Education and Industry Collaborate for Wetland Preservation and Restoration

Rosalie Catalano, VP Corporate Communications, YSI Incorporated
(with input from William Mitsch, PhD., OSU)

As Paul Hawken wrote in *The Ecology of Commerce*, "Corporations, because they are the dominant institute on the planet, must squarely address the social and environmental problems that afflict mankind." The Ohio State University and several of its sister universities in Ohio are benefiting from a Yellow Springs, Ohio-based company that takes Hawken's sentiment to heart. Management and employees throughout YSI Incorporated, a manufacturer of sensor-based instrumentation, believe that the concepts of economic progress for a commercial enterprise and concern for the environment are compatible endeavors.

The Olentangy River Wetland Research Park (ORWRP) at Ohio State, already one of the most comprehensive university locations for studying wetlands, how they work, and how we can restore them, will be getting even better. Through its YSI Foundation philanthropic arm, YSI Incorporated has pledged $200,000 to be disbursed over a four-year period toward a $2.8 million new state-of-the art Wetland Research and Education Building located at the ORWRP on Ohio State's campus in Columbus. The building will house the newly established "Ohio Center for Wetland and River Restoration," a multi-university consortium involving Ohio State, Wright State, Shawnee State, Youngstown State, and Kenyon College, all Ohio colleges involved in wetland research.

At a ceremony in Columbus on World Wetlands Day, February 2, 2001, Dr. Bill Mitsch, Professor and Director of the ORWRP, described the ten-year history of creating the Park from scratch and the goals of the new Center. The Park already features four wetlands, river gauge and meteorological stations, a mesocosm compound where students work on individual research projects, and the Sandefur Wetland Pavilion. The pavilion makes a wonderful viewing center from which visitors can watch the many birds, frogs, muskrats and other animals that call the Park home.

Education and Industry Collaborate, continued

The ORWRP utilizes thirty acres of previously neglected, Olentangy River bottomland at the northern edge of the campus property. The park includes two kidney-shaped marshes, one "billabong" wetland (a swamp along a river), and a corridor of wet woodlands along the Olentangy. Forty-nine students from OSU as well as several universities in Europe have already completed theses and dissertations through research at the Park. YSI water testing equipment and long-term monitoring systems have been and will continue to be instrumental in making the real-time water quality data available in the operations theater or "control center," which will bear the YSI name.

The new building will also feature wetland sensors, including water quality and water level and flow systems, "swamp cams," reference and conference rooms, laboratories, and faculty offices. The lobby will be adjacent to a high-tech "operations theater" where visitors can view instant readouts of information from the monitoring systems. Some of this information will also go out over the Internet so students, scientists, and the public from around the world can see in real time how the experimental "kidney" marshes at the ORWRP compare. "This will be sort of like watching a scoreboard at a basketball game," says Mitsch. Which wetland will "win," the one planted by people in 1994 or the one Mother Nature planted? "Only instead of a 3-hour game, this contest will take about 20 years," according to Mitsch.

When asked what he has learned through the process of raising funding for the Center, Dr. Mitsch indicated that professors sometimes tend to be narrow in their thinking about where

they can get resources to carry out their research. "They focus on government agencies and ignore opportunities with private organizations," Mitsch noted. Such university-corporate relationships can benefit both companies and universities if they are founded in a mutual trust. The ORWRP and the Center benefit from early availability of state-of-the-art equipment, as well as the opportunity to serve as a beta test site and provide practical and firsthand feedback. YSI, whose corporate tag line asks the rhetorical question "Who's Minding the Planet?" benefits from being associated with a project that is consistent with one of its core values—ecological sustainability.

In addition to the collaboration with YSI, the ORWRP has also benefited from a relationship with other companies such as a local Columbus contractor, George J. Igel & Co., Inc. Igel bid and subsequently excavated the land for the construction of the original wetlands at this campus site. As a result of this experience and working with campus wetland experts, the Igel firm has developed expertise and a reputation in Central Ohio for building wetlands and has since offered to donate groundwork for the new building, where groundbreaking took place May 11, 2001. Academic institutions should develop and nurture relationships with private industry not only for monetary contributions but also for these creative types of symbiotic relationships, says Mitsch. And wetlands proved to be the ideal location for this "ecological" relationship to take place.

For more information about the ORWRP contact Dr. Mitsch at mitsch.1@osu.edu or visit the site's web page at http://swamp.ag.ohio-state.edu

For more information about YSI instrumentation contact Bill Littleton at blittleton@ysi.com or visit the company's web site at http://www.ysi.com

SPORTS: Goosen, Brooks tie in U.S. Open; 18-hole playoff today | B1

HOME FINAL

The Columbus Dispatch

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Naming rights at OSU come in all sizes

■ To raise money, the university puts the names of sections of buildings up for sale.

By Alice Thomas
Dispatch Higher Education Reporter

A lobby bears the name of a once-beloved family dog. A courtyard trumpets a rubber company. A heating-and-cooling unit, possibly some gardens and numerous classrooms remain up for grabs.

At Ohio State University, it's not just big buildings that bear plaques, corporate logos or personal tributes for a price.

Naming rights have been downsized, and perpetuity is claiming — and paying for — more space on campus.

"We've had to figure out how to bring private gifts into almost every new building that was built," said John Meyer, assistant vice president and director of university development. "It does help provide nicer space."

Naming rights are nothing new in this country — where one can pay to pin a name on a personal star in a faraway galaxy — and universities have long used them as a way to attract donations and pay tribute.

But faced with dwindling state tax support and a desire to build cutting-edge facilities, Ohio State is naming more buildings and spaces after corporations or wealthy individuals that otherwise might have memorialized faculty members or presidents.

Such was the case in 1995, when faculty in the Department of Chemistry protested naming a building after

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Alysia Peyton / *Dispatch*

Thekla Shackelford sits in the lobby of the OSU Veterinary Hospital. She gave $100,000 to the school, which will name the lobby after her dog, Jane.

NAMING *from* A1

former Gov. Richard F. Celeste instead of two venerable chemistry professors.

Another high-profile naming — Value City Arena and the Jerome Schottenstein Center — irked some faculty members, who saw it as a flagrant display of commercialism.

"At the time the Schott was built, they were saying: 'Well, why don't we just sell the rights to Disney World? Make it the College of Mickey Mouse,'" one OSU employee recalled.

In some states — Ohio is not included — naming at public universities are now subject to oversight because of related controversies.

Last year, the Florida Board of Regents decided it would approve all building names in the wake of an ugly flap at the University of Florida. The college named its law school after a personal-injury lawyer who donated $10 million but had a less-than-favorable reputation among some colleagues.

No matter the state, one constant endures: Names are worth cash.

The money raised from naming rights in OSU's $1 billion Affirm Thy Friendship campaign, for example, totaled $120 million, Meyer said. The campaign ended last year, but many naming opportunities remain.

"It can get carried away, but I'm not opposed to it," said Bill Mitsch, head of OSU's Olentangy River Wetland Research Park. "About the only other way to do it is pork-barrel legislation, and I don't do that."

Mitsch, who holds joint professorships in natural resources and civil and environmental engineering, knows all about fund raising.

With help from university development officials, he drew a "naming opportunities chart" that will pay for a $2.7 million Wetland Research and Education Building, and a $1.3 million endowment to keep it running.

Aside from rights to the building, which cost $1.5 million, smaller sections up for sale include three offices ($50,000 each), the heating-and-cooling system ($300,000) and a library ($200,000).

Already taken is the control room, which Y.S.I., a Yellow Springs company, bought for $200,000.

"It's going to be visited by wetland experts, student researchers — probably from around the globe," company spokeswoman Rosalie Catalano said. "It's an opportunity to show what the Y.S.I. products can do.

"Every company loves the opportunity to have students associate with a company early on in their careers. They tend to use those products they're familiar with when they're off on their own working or doing research."

Y.S.I.-manufactured sensors, which collect data on water quality, are used at the man-made wetlands. Mitsch has used the company's products for years.

So when he began scratching his head for potential donors to pay for the soon-to-be-built structure, he arranged a meeting with Y.S.I.'s charitable foundation board and later obtained its blessing.

To secure large gifts, university employees — from professors to the president — must spend time "cultivating" donors.

From wining and dining to inviting donors to participate in the planning process, university development has become a delicate art.

Leigh Briggs, development officer in OSU's Food, Agricultural and Environmental Sciences College, said the effort requires healthy doses of time and patience.

"It's getting them to have a feeling of ownership," Briggs said. "You know you've made some progress with the donor when they say *we, our, our building.*"

Such ownership was what indirectly led to Jane's Lobby, the name of the waiting room in OSU's Veterinary Hospital on Tharp Street.

Thekla Shackelford had taken her pet Dalmatian, Jane, to the hospital for years and served on a committee to raise money for the veterinary school's new building, which is under construction on Coffey Road.

When Jane died several months ago, Shackelford thought the old lobby she'd spent so much time in could use some sprucing up. She gave $100,000 for lobby renovations, with any leftover money going toward the new building.

The idea was hers, she said.

"It's one of the best vet schools in the country and very avant-garde," Shackelford said. "And I just felt that the lobby needed to be nicer."

While OSU has rules that govern the naming of buildings, the naming of "internal spaces" such as Jane's Lobby aren't subject to them, Meyer said. That gives the university more discretion, he said, allowing greater creativity with naming opportunities.

In Wooster, at OSU's Ohio Agricultural and Research Development Center and Agricultural Technical Institute, the sale of naming rights paid for about half the cost of a $4 million economic-development center.

Naming opportunities range from $5,000 for a name on the lobby wall to $550,000 for the building name. Nationwide Foundation bought the building name and will call it the Shisler Center, after former Nationwide board member Arden Shisler, a native of Wayne County.

Newell Rubbermaid dished out $175,000 for the courtyard, which will be called the Rubbermaid Home Products Courtyard, and two seminar rooms sold for $75,000 apiece.

The campus recently toasted its building — and its donors — at a dinner, but officials are looking ahead to their next project — a renovation of Secrest Arboretum, said Becky Rader, who does development for the campus.

A naming-opportunities chart hasn't been decided upon. But ideas for the $6 million project, which will include a visitors' center, are being kicked around. They include naming rights for gardens.

Rader said the gardens could bring as much as $20,000 apiece.

"The smaller things add up," Rader said. "And that's what helps. No gift is too small."

athomas@dispatch.com

Your name here

You don't need to donate millions to be immortalized at Ohio State University. The school has a wide variety of naming options available, for a variety of prices. Here are examples of what spaces sell for at OSU:

Steve Spencer / *Dispatch illustration*

Source: Ohio State University

SOLD

- **Courtyard, Shisler Center** for Education and Economic Development at ATI in Wooster — bought by Newell Rubbermaid for $175,000
- **Waiting room, Veterinary Hospital**, 601 Vernon Tharp St. — purchased by Thekla Shackelford for $100,000
- **Brewster Dairy Pilot Plant**, Parker Food Science Building — $250,000, bought by Brewster Dairy
- **Graduate student offices**, Parker Food Science Building — three at $25,000 each; others at various prices

AVAILABLE

- **Mud Room**, Wetland Research and Education Building at the Olentangy River Wetland Research Park — $100,000
- **Student lounge**, the new facility for the Department of Mechanical Engineering — $250,000
- **Faculty offices** in the College of Veterinary Medicine Building — 19 of 20 left at $10,000 each

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THURSDAY
July 19, 2001

A financially independent student laboratory newspaper at the Ohio State University

OSU wetland's facility relocates and upgrades

By Jen Journy
Lantern staff writer

Ohio State's research center for wetlands is getting a new home.

William Mitsch, director of the Olentangy River Wetlands Research Park and professor of natural resources and environmental science at OSU, is excited to be moving from his office in Kottman Hall to the new OSU Research and Education Center by the Olentangy River.

Mitsch said no other university has anything like it.

"We'll be the best-rated wetland research university in the country, no other university can touch us," Mitsch said.

> *"Basically to build a good wetland, you need to get your degree from The Ohio State University."*
>
> —William Mitsch
> Wetlands Director

The plans are just in the beginning stages, with funding being the only big obstacle, he said. OSU isn't offering the research center anything but their support, Mitsch said. The center is competing with other big university projects, like the new stadium, for funding.

"Those who do donate money should be proud. We know we're doing something right, we're helping the environment," Mitsch said.

The new building will be a one-story, 9,000 square-feet research center. Most of the rooms are being reserved for labs, but there will be one big conference room where Mitsch said he plans on teaching the world how to build wetlands. The architects have also allowed for a large lobby to hold large tour groups. Mitsch said he is excited to show everyone how the wetland research center will work.

Phase I of the Olentangy River Wetlands Research Park, included two kidney-shaped wetlands. Mitsch said he thinks of the wetlands as the kidneys of the environment. Just as kidneys in human body work to keep the human body healthy and clean, the wetlands work to keep the land clean.

Over the past 300 years, the United States has lost over half of their wetlands. Mitsch recently served on an advisory committee for the Natural Resource Council. The NRC found that despite progress in wetlands preservation, there is still a continued loss.

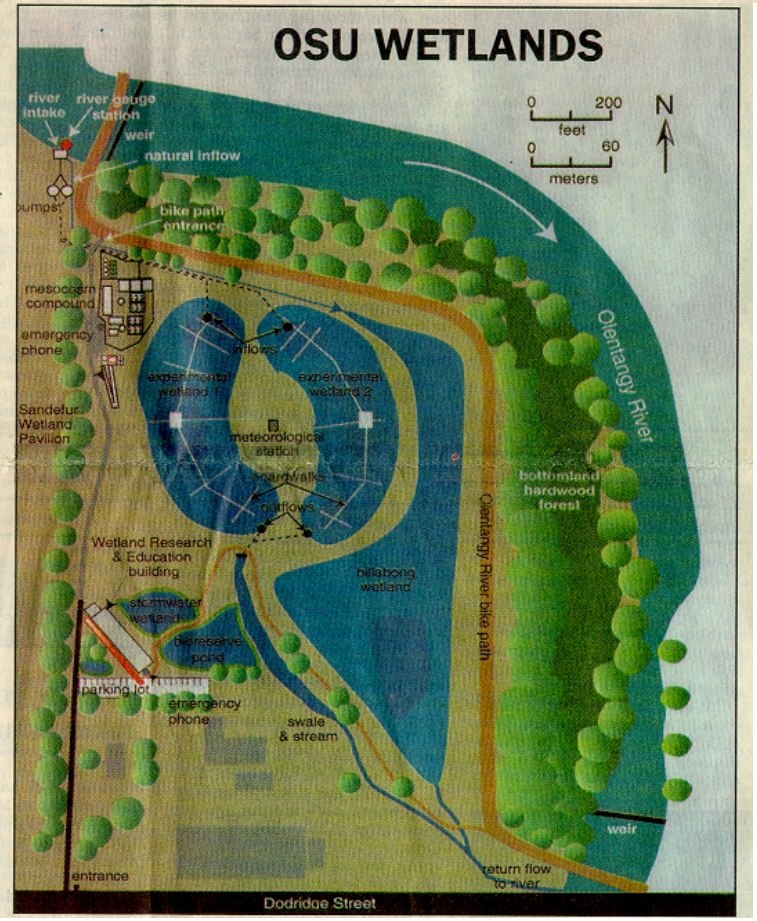
Since the Clean Water Act was passed in the early 1970s, the decrease of wetlands has slowed. The Act called for land developers to build on wetlands with a stipulation to build another wetland. Mitsch said the act serves as a good deterrent, but the new wetlands are not surviving well.

Mitsch has been working with other committee members to improve the act in order to save the wetlands. The act does not require land developers to work with wetland researchers when building a new one.

"Basically to build a good wetland, you need to get your degree from The Ohio State University," Mitsch said.

Another problem with the legislation is that no one follows up on whether the developers follow through with their promise to build a new wetland.

"In the end, the developer gets his shopping mall, and nature loses," Mitsch said.



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(Last updated 6/14/01)

Past research stories pertaining to Professor Mitsch's work:

"Do Mitigated Wetlands Really Work?" 2/16/00.

"Potential Solutions for Gulf of Mexico's 'Dead Zone' Explored" 6/17/98.

"Special Journal Issue Examines Environmental Problems In Europe," 8/29/97

"Wetlands Threatened By New Federal Legislation, Report Suggests," 3/27/96

Mitsch is director of the Olentangy River Wetland Research Park.

Map showing the extent of both the Mississippi River Watershed and the area of the Gulf of Mexico hypoxia is available. Click here.

Additional references:

EPA's Mississippi River Basin website.

National Oceanic and Atmospheric Administration's report on "Hypoxia In The Gulf Of Mexico."

MUDDY WATERS: LETTING THE GULF OF MEXICO BREATHE AGAIN

COLUMBUS, Ohio - Saving the Gulf of Mexico from polluted runoff is possible, but it means creating or restoring at least 5 to 13 million acres of wetlands in the Midwest and the lower Mississippi River basin, according to a new report by environmental researchers.

Led by William Mitsch, a professor of natural resources and environmental science at Ohio State University, the scientists also recommend creating or restoring 19 to 48 million acres of streamside forest areas.


William Mitsch

Together, that's at least enough created and restored wetland and forested area to fill all of West Virginia. The report appears in the May issue of the journal *Bioscience* .

It's estimated that the American Midwest has lost about 80 percent of its wetlands in the last two centuries, compared to a 50 percent loss in the contiguous United States.

"Together, we need at least enough newly created and restored wetlands and forested area to fill an area equal to all of West Virginia."

Wetlands create buffers between agricultural lands and streams and rivers. They also reduce the level of chemicals - agricultural and otherwise - that wash into waterways.

Under current conservation programs, about 577,000 acres of wetlands have already been created or restored. About 10 to 25 times more wetlands are needed to cause a significant reduction of nitrogen levels in the Gulf, said Mitsch.

"There are countless federal programs to help support wetland restoration and creation," he said. "And that may help solve half of the problem. It could cost anywhere between $300 to $2,000 per acre to restore and create wetland areas in the Midwest; it's less expensive to create a wetland in an area that used to be a wetland."

In comparison, Mitsch said efforts to restore the 1.4 million acre Everglades National Park is costing taxpayers about $8 billion.

The Mississippi River feeds the Gulf of Mexico, and the Mississippi River basin includes 40 percent of the lower 48 states. Runoff from watersheds in the basin eventually makes its way to the Gulf.

That runoff is full of nitrogen and other chemicals that algae thrive on, experts say. Resulting algal blooms deplete the water of nearly all dissolved oxygen, turning the Gulf each spring into what's been termed a "dead zone." Dissolved oxygen levels dip below 2 parts per million, and most aquatic species can't live in waters containing less than 2 ppm of oxygen. Dissolved oxygen levels in the Gulf are normally about 5 to 10 ppm.

The "dead zone" typically begins in the spring, when planting and fertilizing fields peaks. The accumulation of nitrogen and other chemicals usually reaches a maximum in midsummer and disappears in the fall, Mitsch said. While the size of the zone varies from year to year, it has encompassed more than 7,000 square miles of the Gulf.

Mitsch co-authored the report with John Day, of Louisiana State University; J. Wendell Gilliam, of North Carolina State University; Peter Groffman, of The Institute of Ecosystem Studies in Millbrook, N.Y.; Donald Hey, of the Wetland Initiative in Chicago; Gyles Randall, of the University of Minnesota; and Naiming Wang, of the South Florida Water Management District.

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Ohio State Homepage

(Last updated 6/26/01)

The report will be available on the Internet at National Academy Press. Phone (202) 334-3313 or 1-800-624-6242.

Reporters may obtain a pre-publication copy from the Office of News and Public Information. Contact: Bill Kearney, Media Relations Officer; phone (202) 334-2138, fax (202) 334-2158, or e-mail news@nas.edu.

Past research stories pertaining to Professor Mitsch's work:

"Muddy Waters: Letting The Gulf Of Mexico Breathe Again," 6/14/01.

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"Special Journal Issue Examines Environmental Problems In Europe," 8/29/97

"Wetlands Threatened By New Federal Legislation, Report Suggests," 3/27/96

WETLAND LOSS STILL OUTWEIGHS GAIN DESPITE 20 YEARS OF PROGRESS

COLUMBUS, Ohio - Despite 20 years of progress in restoring and creating wetlands, we still have not stopped the loss of wetlands in America, according to a report released by the National Research Council (NRC).

William Mitsch, director of the Olentangy River Wetlands Research Park at Ohio State University, served on the advisory committee for the report, entitled "Compensating for Wetland Losses Under the Clean Water Act."


William Mitsch

Mitsch, who also holds professorships in natural resources and environmental science at Ohio State, said the report "recommends improving current federal mitigation laws to achieve the goal of stopping the net loss of wetlands." Mitigation usually means creating or restoring more than one acre of wetlands for every acre of wetland filled.

"Up to 20 years may be needed for some restored or created wetland sites to achieve functional goals."

Efforts to restore wetlands have made some headway: Loss of wetlands in the United States has declined during the past 15 years - from 1986 to 1997, the estimated annual rate of wetland loss was 23 percent that of the previous decade, according to the NRC report. But data in the report show that required mitigation projects often aren't undertaken or fail to meet permit conditions outlined by Section 404 of the 1972 Clean Water Act.

Section 404 requires those who want to discharge materials - such as soil or sand - into a wetland to get permission from the U.S. Army Corps of Engineers before doing so. It also requires individuals to provide "compensatory mitigation" - such as creating a wetland elsewhere - as a condition for issuing a permit.

"Some sites we studied met the criteria for permit compliance and show promise of developing into functional wetlands," Mitsch said. "But in many cases, wetlands are created in areas where they simply can't thrive or the required compensation actions are poorly designed or carelessly implemented."

The NRC report suggested that sound mitigation plans could result in a gain of 78 percent in wetland area nationally. But even though 1.8 acres of wetlands were created or restored for every acre lost during the past eight years, the United States still lost wetlands.

"Some wetland loss is not covered by Section 404," Mitsch said. "Also, created or restored wetlands are often poorly constructed."

Since the 1780s, the contiguous United States has lost more than 50 percent of its wetlands, Mitsch said, though the loss has slowed in the last two decades.

"Either enforcement of Section 404 is having some effect as a deterrent to filling wetlands, or we are simply running out of wetlands to fill," he said.

In addition to poorly implemented mitigation, wetland monitoring "is seldom

required for more than five years," he said. "But up to 20 years may be needed for some restored or created wetland sites to achieve functional goals."

The report outlined several recommendations for stopping the loss of wetlands including:

- creating or restoring mitigation wetlands before filling the original wetland in;
- choosing wetland restoration over creation;
- designing and constructing individual mitigation sites to maximize the likelihood that they will make an ongoing contribution to the watershed; and
- securing the replacement of lost wetland function by providing effective legal and financial assurances for long-term sustainability and also monitoring all compensatory wetland projects.

Mitsch's colleagues on the report committee included researchers from the University of Wisconsin, Madison; Virginia Polytechnic Institute and State University; North Carolina State University; Stetson University College of Law; University of Minnesota, Duluth; University of Maryland; University of Washington, Seattle; and Louisiana State University. Representatives from the California Department of Transportation, Savannah River Ecology Laboratory, and WilsonMiller, Inc. served on the committee as well.

The report was sponsored by the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

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CIVIL ENGINEERING NEWS

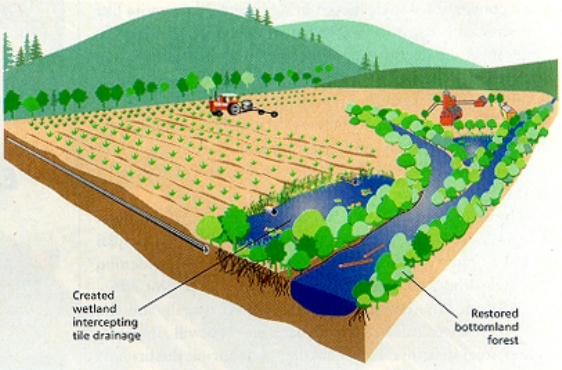
WATER QUALITY

Plan to Reduce 'Dead Zone' Will Cost $1 Billion Annually

Congress is considering a plan for implementation in fiscal year 2002 that would reduce the Gulf of Mexico's "dead zone" by more than 50 percent by 2015. The $1-billion per year action plan is based on several reports assessing the source, effects, and consequences of the dead zone, which is caused by excessive nutrient loads entering the gulf.

Findings from a report on reducing nutrient loads in the Gulf of Mexico were used in creating the action plan. A team of researchers led by William Mitsch, a professor of natural resources and environmental science at Ohio State University, produced the report, which offers several methods for reviving the dead zone.

Ninety percent of the freshwater flow into the Gulf of Mexico comes from the Mississippi River basin, which contains runoff from 31 states. The nutrient load reduction report recommends the creation and restoration of 24 million acres (10 million ha) of wetlands and riparian areas that would act as buffers between the source of the pollution and the river.



A plan under review by Congress includes creating wetlands and changing farm practices to shrink the Gulf of Mexico's "dead zone" by more than half.

The team also recommended restoring between 19 million and 48 million acres (8 million and 19 million ha) of streamside forests. "It could cost anywhere from five hundred to ten thousand dollars an acre to implement the wetland and riparian zone measures," says Mitsch. The actual costs will depend on geography; for example, it is less expensive to create a wetland in an area that used to be a wetland, he says.

Other reduction methods outlined in the report include controlling floods in the upper basin of the Mississippi, improving domestic wastewater treatment, reducing the use of nitrogen-rich agricultural fertilizers, and fertilizing in the fall, when the dead zone disappears.

University researchers measured the dead zone this summer and found it to cover a record 7,913 sq mi (20,495 km^2), an area approximately the size of Massachusetts. During the past five years the zone has averaged 5,400 sq mi (14,000 km^2), and according to Mitsch, the data suggest the size is increasing.

Polluted runoff entering the gulf containing nitrates, nitrogen, and other chemicals can cause algae blooms that reduce dissolved oxygen levels to 2 mg/L or less, a condition that is deadly to aquatic species, hence the name dead zone.

—*Madonna Aveni*

RESEARCH

MIT Labs Merge to Promote Sustainable Development

Two Massachusetts Institute of Technology (MIT) labs—the Energy Laboratory and the Center for Environmental Initiatives—have been combined to form the Laboratory for Energy and the Environment. The merger is designed to enable researchers to simultaneously examine topics related to energy and environmentally sustainable development. Faculty and staff from 13 departments that were previously collaborating across departments and disciplines will now be under one roof.

According to Stephen Connors, a director of the former Energy Laboratory, the environmental component of research there had been increasing ever since the lab was established in 1972. Merging the two labs was inevitable, Connors says, because their areas of research were overlapping and the two units were already working together. An example of the overlap can be seen in Connors's own research on regional electricity alternatives. He must assess not only the energy use aspects of each alternative but also the emissions and other environmental impacts.

The new lab will become a central point of contact for other departments that are conducting research that has a bearing on energy or environmental issues. Connors says the merger is an example of MIT's strong commitment to facilitating multidisciplinary research.

—*Madonna Aveni*

The Columbus Dispatch

■ ★ Saturday, November 10, 2001

Corps' plan for wetlands angers critics

By Michael Hawthorne
Dispatch Environment Reporter

Federal regulators are moving away from a decade-old program that allows developers to destroy wetlands if they create substitute patches of the environmentally sensitive landscapes.

Instead, the Army Corps of Engineers will let developers fill in wetlands if they preserve other existing wetlands or establish buffers of trees and other vegetation along streams.

Corps leaders say the new policy will strengthen former President Bush's 1989 pledge that there would be "no net loss" of wetlands. But environmentalists contend the policy will make it easier for developers to destroy marshes, swamps and bogs that serve vital ecological functions.

Maj. Gen. Hans Van Winkle says "wetlands banks" preserve larger tracts of land.

Wetlands are sometimes called the "kidneys of the earth" because they cleanse and filter water before it flows into streams and lakes. Once considered to be useless, bug-infested swamps, wetlands now are valued for providing natural flood control and important habitats for birds and other wildlife.

The corps announced the new policy last week in response to a National Academy of

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Sciences study that reviewed hundreds of replacement wetlands. The academy found that some were never started, some were not completed and others failed to provide the benefits of natural wetlands.

"We haven't done a good enough job, but we are strongly committed to the 'no net loss' policy," Maj. Gen. Hans Van Winkle, the corps' deputy commander, said yesterday during a tour of Ohio State University's Olentangy River Wetlands Research Park.

"If we can turn this over to professionals on a large scale, I think we can do a better job enhancing the quality and quantity of wetlands."

The federal Clean Water Act prohibits discharging soil and sand into U.S. waters without a permit. Regulation of wetlands is shared among the corps, the Environmental Protection Agency and states, but the corps has final say on permit applications.

Property owners generally have three options when seeking to fill in a wetland: build around the area, buy credits from organizations known as "wetland banks" that preserve other existing areas, or attempt to create artificial wetlands on once-dry land.

Van Winkle said relying on wetland banks, the preferred option of developers, is better because it preserves large tracts rather than smaller patches that can be compromised by surrounding subdivisions and shopping centers.

Environmental groups are angry that the corps adopted the policy without first giving the public a chance to comment.

"I don't know why any developer would try to avoid a wetland if they could just buy some credits in a wetland bank," said Julie Sibbing, a wetlands expert at the National Wildlife Federation. "That's not how you achieve the 'no net loss' goal."

Doral Chenoweth III / *Dispatch*

Ohio State University and Army Corps of Engineers officials tour the Olentangy River Wetlands Research Park. The corps is backing a plan to allow developers to destroy wetlands if they help preserve other wetland areas.

Ohio already has lost 90 percent of its wetlands. Nationally, the loss of wetlands has slowed, but the academy study found that the "no net loss" goal has not been met.

Since 1993, the corps has required about 42,000 acres of substitute wetlands to be built each year on average, according to the study. Those areas were to compensate for the annual loss of about 24,000 acres.

The requirement was only on paper, though. The study concluded that the corps often fails to track compliance, and when it does, compliance has been poor.

"We don't have the resources to conduct a comprehensive review of every permit," Van Winkle said. "And frankly, there isn't a strong desire in Washington for more regulators."

Developers say relying on wetland banks will ensure that high-quality wetlands are preserved. The Ohio Home Builders Association formed a nonprofit foundation in 1992 that took advantage of what then was a little-used alternative to preserving wetlands at the site of a development.

The foundation's wetland banks include sites at the Hebron Fish Hatchery in Licking County, the Big Island Nature Preserve near Marion and a metro park in Lorain County.

"Our environmental laws were never written or intended to stop development," said Vince Squillace, a lobbyist for the home-builders association.

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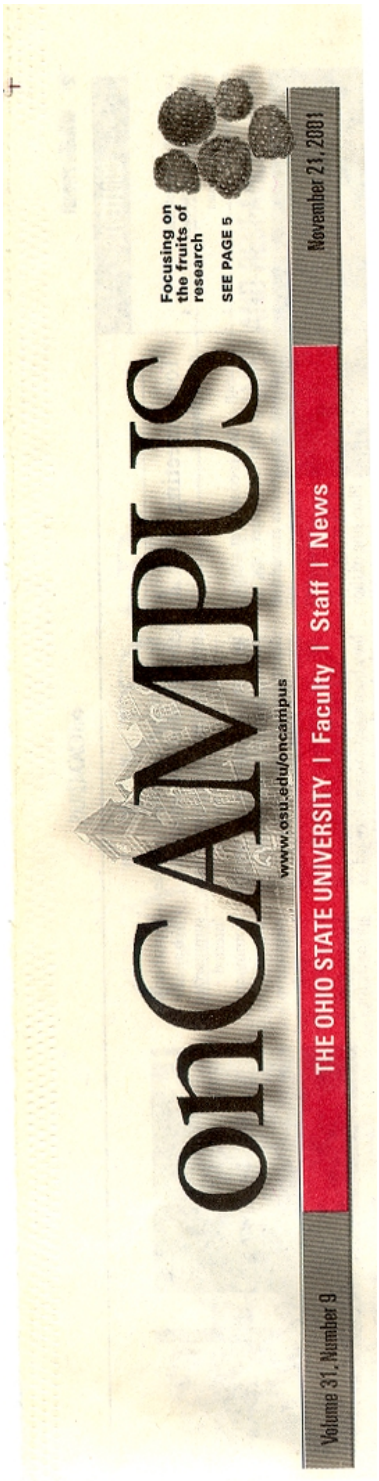

WETLAND RESEARCH

By Jodi Miller

Major Gen. Hans Van Winkle, the deputy commanding general of the U.S. Army Corps of Engineers, discusses the Corps' wetland restoration and protection strategies during a Nov. 9 visit to campus, which included a stop at the Olentangy River Wetland Research Park.